

**AMENDMENTS TO THE SPECIFICATION:**

Please replace the paragraph beginning on page 1, line 6, with the following amended paragraph:

The present invention relates to a method for measuring systems ~~according to the preamble of the appended claim 1~~. The invention is especially intended for use with intensity-based fibre-optical measuring systems for pressure measurements. The invention also relates to a device for carrying out such a method, ~~according to the preamble of the appended claim 10~~.

Please replace the paragraph beginning on page 2, line 29, with the following amended paragraph:

A primary object of the present invention is to provide an improved measuring system, with the aid of which unwanted influences from sources of error and interference in intensity-based fibre-optical measuring systems can be minimised. This is achieved by means of a method and a device in accordance with the present invention, ~~the characteristics of which are defined in the accompanying claims 1 and 10, respectively~~.

Please replace the paragraph beginning on page 3, line 20, with the following amended paragraph:

It is a further object of the invention to provide a method for an optical measuring system, wherein a signal is brought to come in towards a sensor element, and wherein a measurement of the length of an optical connection between said sensor element and a measuring and control unit can be determined in a simple and

efficient manner. This measurement can in turn be used to obtain improved measurements. ~~This object is achieved by means of a method, the characteristics of which are defined in the accompanying claim 8.~~